

**ATTACHMENT 1**

**CONSUMERS POWER COMPANY  
PALISADES PLANT  
DOCKET 50-255**

**PALISADES NUCLEAR PLANT  
1996 ANNUAL NON-RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT**

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**I. BACKGROUND**

Appendix B of the Facility Operating License, DPR-20, for the Palisades Nuclear Plant, "Environmental Protection Plan (Non-Radiological)" requires Consumers Energy Company to submit to the United States Nuclear Regulatory Commission an annual environmental operating report. This report describes the implementation of the Environmental Protection Plan during the previous year. The period covered by the enclosed report is January 1, 1996, through December 31, 1996.

The Palisades Plant operated for 7126 hours during 1996 producing a net generation total of 5,314,341 MWH. This represents 78.2% of the net demonstrated generating capacity for 1996.

**II. ENVIRONMENTAL IMPACT EVALUATIONS**

Several revisions to procedures and modifications to the facility were evaluated in accordance with Palisades Administrative Procedure 4.22, "NON-RADIOLOGICAL ENVIRONMENTAL PROGRAM" during 1996. Eleven procedures or modifications to the facility were reviewed by the Consumers Energy Company Environmental and Technical Services Department for determination of impact on the environment. Two construction projects and one chemical treatment at the facility required approval from other government agencies prior to initiating.

The construction of a 50,000 gallon fuel oil storage tank, which supplies the plant emergency diesel generators, required permits from the Michigan Department of Environmental Quality, Part 353, Sand Dune Protection and Management, of the Natural Resource and Environmental Protection Act, 1994, PA 451 permit No. 96-VB-089-C, and the Van Buren County Soil Erosion & Sedimentation Control Agency, Act 347, P.A. of 1972 permit No. 07-1-024.

A modification to the plant vehicle barrier system, which extended the barrier farther into Lake Michigan, required a permit amendment by the State of Michigan Department of Natural Resources, Part 325 Great Lakes Submerged Lands permit No. 95-12-0335. This change also required an amendment for the Department of The Army, U.S. Corps of Engineers, Section 10 of the 1899 Rivers and Harbors Act and Section 404 of the 1977 Clean Water Act permit No. 80-200-001-3.

A chemical treatment with the chemical "Nalco 1250 Plus" (Carbohydrazide) was performed on the plant's steam generators during the plant refueling outage. Prior approval was obtained from the Michigan Department of Environmental Quality's (MDEQ) Great Lakes Environmental Assessment Section (GLEAS) and the Surface Water Quality Division, Plainwell, Michigan District Office, of MDEQ.

There were no changes, tests, or experiments which involved an unreviewed environmental question, or involved a change to the Environmental Protection Plan.

### **III. ADDITIONAL ACTIVITIES AUTHORIZED UNDER NPDES**

During 1996, the National Pollutant Discharge Elimination System (NPDES) permit No. MI0001457 did not require any changes nor were there any violations to this permit.

The Ground Water Remediation System was operational during the months of January and March of 1996. The unit effectively processed a total of 4.19 million gallons of trichloroethylene (TCE) and tetrachloroethylene (PCE) contaminated groundwater and 2,376,000 cubic feet of soil vapor. No TCE & PCE were removed from the groundwater and no Volatile Organic Carbon (VOC) was removed from the soil at the old fuel depot site. The groundwater remediation project is regulated under the NPDES Permit No. MI0049131.

The unit was not operated during the second, third, and fourth quarters of 1996, in order to initiate a site closure, which required a 12 month period of monitoring only. The monitoring wells and the extraction wells were sampled on a quarterly basis to demonstrate both parameters remained below the effective cleanup criteria of 5 ug/l of TCE and PCE.

### **IV. NONCOMPLIANCES AND UNUSUAL ENVIRONMENTAL EVENTS**

There were no noncompliances to the Environmental Protection Plan and no unusual environmental events throughout 1996.

### **V. ENVIRONMENTAL MONITORING**

Documentation of the effects of the cooling tower operation on meteorological variables was required for two years following the conversion from the once through cooling system to the cooling towers. The cooling towers have been in operation for a period of 22 years. There were no meteorological monitoring activities related to the cooling towers during 1996.

Herbicides were not applied to the transmission line or exit corridor during 1996, but other areas on the Palisades property were treated for vegetative management during 1996 by Rose Exterminators Company. The application of herbicides is documented in Enclosure A, pages 1 through 5.

#### **VI. NONROUTINE REPORTS**

There were no nonroutine reports generated during 1996.

**ENCLOSURE A**

**CONSUMERS POWER COMPANY  
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**PALISADES NUCLEAR PLANT  
1996 ANNUAL NON-RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT  
HERBICIDE TREATMENTS**

5 Pages

## **ENCLOSURE A**

### **HERBICIDE TREATMENTS**

**Date of Treatment / Company:** May 29, 1996 / Rose Exterminator Company

**Commercial Name:** Karmex DF

**Chemical Name:** Diuron

**Concentration of Active Ingredient in Field Use Mix:** 4 lbs/acre

**Diluting Substance:** Water

**Rate of Application:** 25-40 gallons per acre at 20-25 psi

**Total Amount of Product Used:** 100 gallons

**Method of Application:** Power hand held sprayer

**Frequency of Application:** One application per growing season

**Location:** Along and near roadways, fence lines, walkways, parking lots, containment area, substations, and cooling towers

**Purpose of Treatment:** Vegetative control of weed species

## **ENCLOSURE A**

### **HERBICIDE TREATMENTS**

**Date of Treatment / Company:** May 30, 1996 / Rose Exterminator Company

**Commercial Name:** Karmex DF

**Chemical Name:** Diuron

**Concentration of Active Ingredient in Field Use Mix:** 4 lbs/acre

**Diluting Substance:** Water

**Rate of Application:** 25-40 gallons per acre at 20-25 psi

**Total Amount of Product Used:** 100 gallons

**Method of Application:** Power hand held sprayer

**Frequency of Application:** One application per growing season

**Location:** Along roadways, fence lines, walkways, parking lots, containment area, substations, and cooling towers

**Purpose of Treatment:** Vegetative control of weed species

## **ENCLOSURE A**

### **HERBICIDE TREATMENTS**

**Date of Treatment / Company:** June 4, 1996 / Rose Exterminator Company

**Commercial Name:** Karmex DF

**Chemical Name:** Diuron

**Concentration of Active Ingredient in Field Use Mixture:** 4 lbs/acre

**Diluting Substance:** Water

**Rate of Application:** 25-40 gallons per acre at 20-25 psi

**Total Amount of Product Used:** 100 gallons

**Method of Application:** Power hand held sprayer

**Frequency of Application:** One application per growing season

**Location:** Along roadways, fence lines, walkways, parking lots, containment area, substations, cooling towers

**Purpose of Treatment:** Vegetative control of weed species



## **ENCLOSURE A**

### **HERBICIDE TREATMENTS**

**Date of Treatment / Company:** June 5, 1996 / Rose Exterminator Company

**Commercial Name:** Karmex DF

**Chemical Name:** Diuron

**Concentration of Active Ingredient in Field Use Mix:** 4 lbs/acre

**Diluting Substance:** Water

**Rate of Application:** 25-40 gallons per acre at 20-25 psi

**Total Amount of Product Used:** 100 gallons

**Method of Application:** Power hand held sprayer

**Frequency of Application:** One application per growing season

**Location:** Along roadways, fence lines, walkways, parking lots, containment area, substations, cooling towers

**Purpose of Treatment:** Vegetative control of weed species

**ENCLOSURE A**

**HERBICIDE TREATMENTS**

**Date of Treatment / Company:** July 1, 1996 / Rose Exterminator Company

**Commercial Name:** Round Up Ultra

**Chemical Name:** Glyphosate

**Concentration of Active Ingredient in Field Use Mix:** 4 lbs/gallon

**Diluting Substance:** Water

**Rate of Application:** 5%, 6.5 ounces per gallon

**Total Amount of Product Used:** 10 gallons

**Method of Application:** Hand held compressed air sprayer

**Frequency of Application:** Spot application as needed

**Location:** Containment area, various areas throughout property

**Purpose of Treatment:** Control of post emergent weeds